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THE INDO-AUSTRALIAN SPECIES OF THE ANT  
GENUS *STRUMIGENYS* FR. SMITH: *S. WALLACEI*  
EMERY AND RELATIVES<sup>1</sup>

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This is another part of my continuing revision of the dacetine ant genus *Strumigenys*. Here are discussed three species of the *szalayi* group, one of which is described as new. The other species of the group will be treated in a later paper in the series. The abbreviations for measurements and proportions are explained in previous parts of the revision: see *Psyche* 60: 1 (1953). Deposition of certain types is indicated by capitals in brackets as follows: United States National Museum [USNM], Museum of Comparative Zoology, Harvard University [MCZ].

*Strumigenys nidifex* Mann

*Strumigenys nidifex* Mann, 1921, Bull. Mus. Comp. Zool. Harvard, 64: 464, fig. 23, all castes.

This very large, dark brown species is found only on a few of the larger islands of the Fijian Group. The original description permits easy recognition; the ant is larger than any other species known from the Indo-Australian area, although Mann's measurements are a bit too low. I have recently received specimens from Mr. N. L. H. Krauss taken at Navai, Viti Levu. It nests under stones, where it builds reticulately patterned nests with mud, or in rotten wood [USNM, MCZ].

*Strumigenys wallacei* Emery

*Strumigenys Wallacei* Emery, 1897, Term. Füzetek 20: 575, 578, pl. 14, fig. 7, worker.

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I have seen no specimens of this species, but Emery's figure and description show that it is very closely related to *S. opaca* sp. nov., described below. Emery's measurements are probably too low ("2 $\frac{3}{4}$ -3 mm."), and in his figure, the eyes may be portrayed as much too flat, judging from other related species. In the width of the head, form and pilosity of the antennal scapes, and other features, this species and *S. opaca* together form a subgroup distinct from the other *szalayii* relatives. Possibly *wallacei*, like *opaca*, may also lack the intercalary tooth of the apical fork. Of *wallacei*, Emery says the gaster is "nitida, nigra, basi rugosi-striata." In the new species, the entire first tergite is sculptured and opaque, and is deep red instead of black. As already mentioned, the difference in the eyes as portrayed in Emery's figure may not be reliable, so we shall have to await an opportunity to see types of *wallacei* before citing other distinctions between the two species. The types are either in the Emery Collection, Museo Civico di Storia Naturale, Genoa, or in the Hungarian National Museum, Budapest, or both. Type locality: Lemien Forest, near Berlinhafen, New Guinea.

***Strumigenys opaca* new species**

Holotype worker: TL 3.49 mm., HL 0.83 mm., ML 0.46 mm., WL 0.81 mm.; CI 86, MI 55. Occipital lobes overlapping pronotum by about 0.04 m., this amount not subtracted from TL.

Head in outline very much as in Emery's figure of *S. wallacei* (see above), very broad and similarly deeply excised posteriorly. Eyes larger, more convex and more strongly protuberant, also more anteriorly directed, than those shown for *wallacei* in Emery's figure. Actually, the eyes are situated on low protuberances, immediately in front of which run deep vertical preocular sulci; the latter continue onto the ventral surface of the head and join there to form the deep postoral sulcus. Antennal scrobes ending abruptly above the eyes. As the head is seen in direct dorsal view, the dorsolateral borders run well inside of the ventrolateral borders and are only very feebly indented at the level of the eyes. The perioocular structure is similar to that of *szalayii*, *nidifex*, etc., but differs in having the dorsolateral

borders only slightly indented above the eyes and in having the eyes themselves much larger and more protruding, more nearly prosopient.

Vertex evenly convex, feebly impressed in the middle; occipital lobes strongly depressed and nearly plane dorsally; broadly expanded both posteriad and laterad. Clypeus more than half again as broad as long, moderately convex, anterior border emarginate and weakly depressed in the middle.

Mandibles about as shown in Emery's *wallacei* figure, slightly depressed and very slightly broadened just at their insertions. Seen from the side, they tilt slightly dorsad and are feebly arched. Apical fork of two long spiniform teeth, subparallel and forming a U, the ventral tooth (L 0.10 mm.) about  $\frac{2}{3}$  as long as the dorsal (L 0.15-0.16 mm.); no intercalary denticle. Preapical tooth slightly curved, spiniform, situated at approximately the apical third of the ML, its L ca. 0.10 mm.

Antennal scapes (straightline L about 0.60 mm.) very feebly bent posteriorly near the base, where they are very slender; apical half gradually incrassate, thickest at about the apical quarter, and gently arched so as to follow the contour of the sides of the head when in repose. This adaptation evidently compensates for the incomplete condition of the scrobes, and is seen in somewhat similar form in *szalayi*. Funiculus L 0.65 mm., the apical segment occupying just half this length; IV longer than I; II and III subequal, longer than broad, together not quite as long as I.

Anterior promesonotum gently convex, descending behind through the evenly concave posterior half of the mesonotum to the lower, extremely feebly convex (nearly straight in profile) propodeal dorsum; metanotal groove obsolete. Promesonotum seen from above with a very narrowly rounded and poorly developed anterior border; cervix with a median dorsal carinula. No traces of humeral angles or tubercles, humeral region gently convex, promesonotal suture obsolete. Propodeal teeth long (L ca. 0.12 mm.), set far apart, slender, acute, feebly diverging and elevated at an angle of about  $35^\circ$  from the plane of the propodeal dorsum. Infradental carinulae indistinct, becoming obsolete ventrad.

Petiole slender, slightly longer than node. Node evenly rounded above, very slightly broader than long, with only very narrow, sublamellose vestiges of appendages posterodorsally, posterolaterally and ventrally. Postpetiole twice as broad as petiole node, and higher and more bulky, subglobose, only slightly broader than long (L 0.20, W 0.25 mm.); spongiform appendages poorly developed, restricted to thin posterodorsal border and meager ventral and ventrolateral lobes.

Entire insect, except for shining mandibular apices, densely and finely sculptured and opaque; the sculpture predominantly punctulate as in other species of the genus, and similarly becoming more superficial and indistinct on the gastric dorsum, which, though largely quite opaque, becomes less definitely so toward the apex.

Dorsum of head, alitrunk and nodes with a sparse, inconspicuous ground pilosity of short, spatulate subappressed hairs. Clypeus with a medially directed fringe of spatulate hairs, about 9 or 10 on each side of the middle. Anterior border of scape with a regular row of stiff, apically-inclined oar-shaped hairs, becoming longer toward the scape apex; a similar row appears in Emery's figure of *wallacei*, but the individual hairs in *opaca* appear to have broader blades apically. Hairs on inner mandibular borders near base long, fine, subreclinate; those near apex longer, perpendicular. Abundant short subreclinate hairs along posterior borders of scapes. No specialized erect hairs on head or alitrunk. Short, erect, posteriorly-inclined clavo-spatulate hairs as follows: a pair on postpetiole; 3 pairs on basal gastric tergite; transverse rows of 4-6 hairs each on succeeding gastric segments, becoming smaller and finer toward extreme apex. Short fine hairs under gastric apex.

Color deep brownish-red; mandibles, legs, antennae and occipital lobes a trifle lighter and more yellowish.

Holotype [MCZ] selected from a nest series of 15 workers taken in rain-forest at Lankelly Creek in the McIlwraith Range, a few miles east of Coen, central Cape York Peninsula, Queensland during June, 1932 (P. J. Darlington: Harvard Australia Expedition).

Paratypes: [MCZ, USNM, Queensland Museum, etc.] the

remaining 14 workers from the type nest series are very uniform in structure and color, and quantitative variation is slight. TL 3.18-3.51, HL 0.78-0.85, ML 0.43-0.48, WL 0.75-0.81 mm.; CI 82-86, MI 54-57.

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FIRST RECORDS OF THE EUROPEAN MANTIS RELIGIOSA (L.) FROM MAINE. — Aside from the persistent records from New York and Ontario, the last three years have produced numerous records of this insect in widely scattered localities in Vermont, Massachusetts, and Connecticut. Although only one specimen was reported in Sept. 1951, from Saco, Maine (Mrs. G. B. Nutting), the following 1952 records from York County, Maine indicate that it may now have a hold in that state: three specimens from Biddeford, 15, 18 Aug., and 6 Oct. (H. J. Edwards, A. Lowell, and J. Foran); one specimen from South Buxton, 10 Sept. (determined by Mr. A. E. Brower of the Entomological Laboratory, Augusta). The Biddeford records, along with numerous other "sightings", were largely from the business district, in yards, on window sills, parking meters, and the like. Although the males fly well, as do many females before they become gravid, this relatively rapid spread is probably due largely to long-distance shipments of hay and nursery stock containing their egg masses.

The average winter temperature of coastal and southeastern Maine is close to that of southern Ontario, but is definitely warmer than northeastern Ontario near the confluence of the Ottawa and St. Lawrence Rivers. Since this mantid is already well established in both these regions of Ontario, it is possible that it may eventually become a permanent resident over much of New England, including coastal Maine. — W. L. NUTTING, Biological Laboratories, Harvard University.